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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,152	12/29/2000	Stephen S. Jackson	2204/A84US	8441

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EXAMINER	
PHUNKULH, BOB A	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/752,152	JACKSON, STEPHEN S.	
	Examiner	Art Unit	
	Bob A. Phunkulh	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-28,30-42 and 44-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, 14-28, 30-42, 44-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is in response to applicant's 12/01/2005 amendment(s)/response(s) in the application of **JACKSON** for "**LOCAL AREA NETWORK WITH ELECTROCHEMICAL POWER SOURCE**" filed 12/29/2000. The amendments/response to the claims have been entered. Claims 13, 29, 43 have been canceled. No claims have been added. Claims 1-12, 14-28, 30-42, 44-47 are now pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-20, 22-35, 37-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Cole* et al. (US 6,348,874), hereinafter *Cole*, in view of *Kamioka* et al. (US 5,990,577), hereinafter *Kamioka*.

Regarding claims 1, 10-13, *Cole* discloses a central network device (the communication device 12, see figures 1-4) for use in a power integrated local area network, the central network device comprising:

an electric power source (Vs see figure 1 or power supply 16, see figure 3); and

a network interface configured to communicate with a plurality of member network devices (nodes 20, see figures 1 and 3; and col. 3 lines 45-55) and to deliver

power, from energy stored by the electrochemical power source, to at least one selected member network device, the selected member network device being capable of accepting power over the power integrated local area network.

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, *a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit* (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a

backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 2, *Cole* discloses the power integrated local area network is configured to execute the Ethernet protocol (see col. 2 lines 37-44).

Regarding claim 3, *Cole* discloses networking logic chosen from the group consisting of a switch, a hub, a router, and a multiplexer (see col. 3 lines 12-23).

Regarding claim 4, *Cole* discloses the power integrated local area network is configured to operate according to a Power Ethernet Standard (see col. 2 lines 37-44).

Regarding claim 6, *Cole* discloses a housing shared by the electrochemical power source and the network interface (see figure 3).

Regarding claim 7, *Cole* discloses power rectification circuitry (Voltage regulator 14 in figure 2 or Power supply 16 in figure 3, see col. 3 lines 39-55).

Regarding claim 8-9, *Cole* inherently discloses the central network device further comprising an AC to DC converter or DC to AC converter (see col. 2 line 65 to col. 3 line 5).

Regarding claim 14, *Cole* discloses the plurality of member network devices comprises a network appliance (see col. 3 lines 5-11).

Regarding claim 15, *Cole* discloses a central network device, wherein the network appliance comprises (remote node 20, see figures 1 and 5):

a peripheral device configured to transmit data to the power integrated local area network (see figures 1 and 5);

a communication engine operably coupled with the peripheral device, the communication engine configured to control data transmission via the power integrated local area network; and

an appliance network interface operably coupled with the communication engine, the appliance network interface being configured to transmit data to and to receive data from the power integrated local area network, data transfer between the peripheral device and the power integrated local area network being forwarded via the appliance network interface (see col. 3 lines 5-11).

Regarding claim 16, *Cole* discloses a power integrated local area network, the network comprising:

a plurality of member network devices (nodes 20, see figures 1 and 3; and col. 3 lines 45-55); and

a central network device configured to communicate with the plurality of member network devices, and to deliver power, from energy stored in an power source, to at least one selected member network device that is capable of accepting power from the central network device (Vs see figure 1 or power supply 16, see figure 3).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, *a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit* (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claims 17, 22, 26-29, *Cole* discloses a central network device for use in a power integrated local area network, the central network device comprising:

networking logic, configured to communicate with a plurality of member network devices (nodes 20, see figures 1 and 3; and col. 3 lines 45-55); and

a power source means for providing power to at least one selected member network device, the selected member network device being capable of accepting power over the power integrated local area network (Vs see figure 1 or power supply 16, see figure 3).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among

the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, *a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit* (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 18, *Cole* discloses the power integrated local area network is configured to execute the Ethernet protocol (see col. 2 lines 37-44).

Regarding claim 19, *Cole* discloses the networking logic is chosen form the group consisting of a switch, a hub, a router, and a multiplexer (see col. 3 lines 12-23).

Regarding claim 20, *Cole* discloses the power integrated local area network is configured to operate according to a Power Ethernet Standard (see col. 2 lines 37-44).

Regarding claim 23, *Cole* discloses power rectification circuitry (Voltage regulator 14 in figure 2 or Power supply 16 in figure 3, see col. 3 lines 39-55).

Regarding claims 24-25, *Cole* inherently discloses the central network device further comprising an AC to DC converter or DC to AC converter (see col. 2 line 65 to col. 3 line 5).

Regarding claim 30, *Cole* discloses the plurality of member network devices comprises a network appliance (see col. 3 lines 5-11).

Regarding claim 31, *Cole* discloses a central network device, wherein the network appliance comprises (remote node 20, see figures 1 and 5):

a peripheral device configured to transmit data to the power integrated local area network (see figures 1 and 5);

a communication engine operably coupled with the peripheral device, the

communication engine configured to control data transmission via the power integrated local area network; and

an appliance network interface operably coupled with the communication engine, the appliance network interface being configured to transmit data to and to receive data from the power integrated local area network, data transfer between the peripheral device and the power integrated local area network being forwarded via the appliance network interface (see col. 3 lines 5-11).

Regarding claims 32, 37, 40-43, *Cole* discloses a method for powering a local area network using power from a central network device, the method comprising:

selecting at least one member network device capable of accepting power over the local area network (see figures 1 and 3); and

providing power, from energy stored by an power source,

to the at least one selected member network device (see col. 3 lines 45-55).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply

circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, *a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit* (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 33, *Cole* discloses executing the Ethernet protocol on the local area network (see col. 2 lines 37-44).

Regarding claim 34, *Cole* discloses the housing the electrochemical power source in a common enclosure with networking logic chosen from the group consisting of a switch, a hub, a

router, and a multiplexer (see col. 3 lines 12-23).

Regarding claim 35, *Cole* discloses operating the local area network according to a Power Ethernet Standard (see col. 2 lines 37-44).

Regarding claims 38-39, *Cole* inherently discloses the central network device further comprising an AC to DC converter or DC to AC converter (see col. 2 line 65 to col. 3 line 5).

Regarding claim 44, *Cole* discloses delivering power from the electrochemical power source to a network appliance (see col. 3 lines 5-11).

Regarding claim 45, *Cole* discloses the network appliance comprises (remote node 20, see figures 1 and 5):

a peripheral device configured to transmit data to the power integrated local area network (see figures 1 and 5);

a communication engine operably coupled with the peripheral device, the communication engine configured to control data transmission via the power integrated local area network; and

an appliance network interface operably coupled with the communication engine, the appliance network interface being configured to transmit data to and to receive data from the power integrated local area network, data transfer between the peripheral device and the power integrated local area network being forwarded via the appliance network interface (see col. 3 lines 5-11).

Regarding claim 46, *Cole* discloses a central network device for use in a power integrated local area network, the central network device comprising:

a housing;

networking logic, enclosed by the housing, configured to communicate with a plurality of member network devices (switching circuit 18 and microprocessor 22, see figure 4);

an power source, sharing the housing with the networking logic, for storing energy to provide power for the member network devices (see power supply 16, figure 3; and switching circuit 18, figure 4); and

rectification circuitry, sharing the housing with the networking logic and the power source(voltage regulator 14, figure 2; power supply 16, figure 3);

wherein the power integrated local area network is configured to execute the Ethernet protocol(see col. 2 lines 36-44).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, *a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit* (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 47, *Cole* discloses a method for powering a local area network using power from a central network device, the method comprising:

housing an power source in a common enclosure with networking logic configured to communicate with a plurality of member network devices (see power supply 16, figure 3; and switching circuit 18, figure 4);

rectifying primary power that is delivered to the central network device, to charge the power source (voltage regulator 14, figure 2; power supply 16, figure 3);

delivering power stored by the electrochemical power source to at least one of the plurality of member network devices (see col. 3 lines 45-55); and

executing the Ethernet protocol on the local area network (see col. 2 lines 36-44).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the

signal processing circuit without passing through a power switch, *a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit* (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Claims 5, 21, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of *Cole-Kamioka* as applied to claims 4, 20, 35 in view of *Hutchison* et al (US 5,838,989), hereinafter *Hutchison*.

Regarding claims 5, 21, 36, the combination of *Cole-Kamioka* fails to disclose the central network device being configured to deliver power and data through an MDI-X compliant port.

Hutchison, on the other hand, discloses media dependent interface (MDI-X) is widely used in Ethernet or 10Base-T network (see col. 8 lines 31-46).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made provides the teaching of *Hutchison* in the system taught by the combination of *Cole-Kamioka* in order to comply with the standard.

Conclusion

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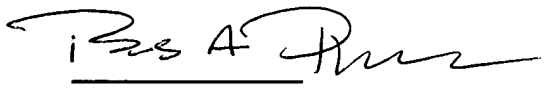
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083.** The examiner can normally be reached on Monday-Tursday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Chau Nguyen**, can be reach on **(571) 272-3126.** The fax phone number for this group is **(571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bob A. Phunkulh
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TC 2600
Art Unit 2661
December 27, 2005

BOB PHUNKULH
PRIMARY EXAMINER